

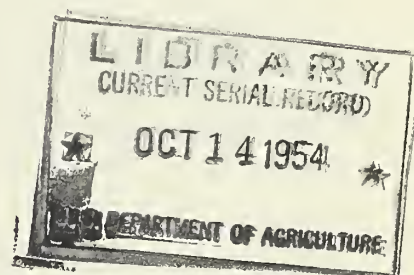
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.942
A87734
Cop. 2

OCTOBER 1954

MARKETING ACTIVITIES



U. S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

Washington 25, D.C.

IN THIS ISSUE

EXPANDING MARKETS THROUGH RESEARCH

By Robert M. Walsh. Page 3

First of a planned series of articles on the marketing research activities of AMS. Mr. Walsh is Chief, Market Development Branch, AMS.

BETTER REFRIGERATION FOR SHIPPED TOMATOES

By Dr. Harold T. Cook. Page 7

A report on a study of great economic importance to tomato shippers and receivers by the assistant head of the Quality Maintenance and Improvement Section, Biological Sciences Branch, AMS.

MARKET BASKET MARGINS

By Kenneth E. Ogren. Page 9

The author, head of the Marketing Information and Statistics Section, Market Organization and Costs Branch, AMS, explains factors entering into the "spread" between farmer and consumer prices of foods.

MORE MILK FOR SCHOOL CHILDREN

By Philip Fleming. Page 12

An important new USDA program is explained by Mr. Fleming who is with the Marketing Information Division, AMS.

CUTTING CAULIFLOWER SHIPPING COSTS

By John C. Winter. Page 14

Sharp reductions in shipping costs of cauliflower from California to Eastern markets are shown in this report by Mr. Winter, who is head of the Transportation Section, Transportation and Facilities Branch, AMS

EGG FACTS FOR CONSUMERS

By Rowena Mainland Page 16

BEEF AND VEGETABLES

By G. Chester Freeman. Page 18

Vol. 17

No. 7

Address all inquiries to:

J. Grant Lyons, Editor,
MARKETING ACTIVITIES,
U. S. Department of
Agriculture,
Washington 25, D. C.

Material in this publication may be reprinted without special permission.

A monthly publication of the United States Department of Agriculture, Washington, D. C. The printing of this publication has been approved by the Director of the Bureau of the Budget (March 24, 1953). Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at a subscription price of \$1.75 a year (domestic), \$2.25 a year (foreign), payable by check or money order. Single copies are 15 cents each.

Expanding Markets Through Research

By Robert M. Walsh

In the reorganization of the U. S. Department of Agriculture last year all marketing research activities of the Department were consolidated in a single division. The Marketing Research Division of the Agricultural Marketing Service, USDA, directs this work. A brief administrative description of the Marketing Research Division's responsibilities follows:

"Administers or participates in the administration of broad agricultural marketing research and development programs authorized by the Agricultural Marketing Act of 1946, and other legislation designed to maintain quality, expand outlets and increase efficiency. The work includes economic, biological, and physical research to develop improved methods, equipment, facilities, information, organization, and management for transporting, handling, storing, packaging, distributing, financing, and pricing agricultural products. It includes also closely associated services required to get improvements adopted to provide more orderly and less costly movement of agricultural products from farms to consumers, and related activities."

Actual research work of the Division is carried out in the Department in Washington, at the Department's Research Center at Beltsville, Md., and in the field at State universities, USDA laboratories, and small field offices.

The Marketing Research Division has 4 Branches, the Biological Sciences Branch, the Market Development Branch, the Market Organization and Costs Branch and the Transportation and Facilities Branch. In the first of a planned series of articles on the work of these AMS agencies, the Chief of the Market Development Branch discusses the activities of that organization.

Are consumers changing their pattern of use of dairy products? Will frozen grapefruit sections help in selling more grapefruit? Do consumers prefer richer breads, and if so will modified baking formulas help in selling more wheat, fats, sugar, and dry milk?

These and other questions are being approached through research in the Department of Agriculture. Answers to such questions will give a better insight into the market possibilities for the production of our farms. They also will furnish a sound basis for action by the Department

and by processing and distributing firms to expand markets for new as well as established products through appropriate programs and promotional activities.

In the recent reorganization of the Department of Agriculture the expansion of domestic markets through research was given emphasis by the establishment of an organization--the Market Development Branch--to devote its entire resources to this type of research.

Organization of Branch

The Market Development Branch is designed to cooperate with producer, distributor, and other trade groups and organizations in carrying out research to assist in expanding consumption of agricultural products in the United States. Its work is carried out through four sections--Product Development, Merchandising Methods, Market Surveys, and Distribution Programs Research. Work in each of the sections is not mutually exclusive. On the contrary, two or more sections frequently collaborate on a given research problem, contributing the different skills represented by agricultural economists, marketing specialists, and social science analysts. Problems that have been tackled include those encountered by producers of nonfood as well as food crops.

Types of Research

Natural fibers--cotton and wool--have met increased competition from man-made fibers in recent years. A series of household and industrial surveys has been conducted to determine preferences and uses for both the natural and synthetic fibers. Studies have been made of women's preferences for fibers and fabrics in items of clothing and in household textiles, and of uses of fibers in the automobile industry, the canvas and awning industry, and in the manufacture of insulated wire and cable. The information has been important in aiding laboratory research men and processors in developing chemically modified natural fibers, and new types of finishes and materials. It has also assisted industry in planning production and promotional programs.

Dairy Products Studies

Consumption of most dairy products, per person, has declined in the past few years. The Market Development Branch has recently initiated a rather comprehensive program of research in the dairy product field in cooperation with several dairy industry organizations. A series of reports, financed jointly by the Department and industry, has been started to provide information on household consumer purchases of certain dairy products on a continuing basis. This service is expected to provide needed information concerning the volume, frequency, and seasonality of family purchases of the products covered, and to reveal differences in purchase rates by geographic divisions and income groups thus permitting rapid and reliable evaluation of the effects of special government programs and industry promotional campaigns on household consumption.

The restricted availability of fluid milk may be a limiting factor

in its consumption. New ways of marketing milk to increase its availability at places where people work, go to school, live, or play are being explored. A study is being initiated to permit measurement in local areas of the effect of vending machines on total milk consumption. It is anticipated, also that the Market Development Branch, in collaboration with the Food Distribution Division of the Agricultural Marketing Service and State and local agencies, will shortly undertake experiments to test possible innovations leading to further increases in milk consumption through the 50 million dollar School-Milk Program, new this school year. In other studies the effects of various retail merchandising practices for cheese and butter will be evaluated to learn whether improved methods will increase consumer sales. A study recently completed for the Memphis market indicates that declining prices accompanied by improved merchandising practices and intensive advertising efforts resulted in a significant gain in fluid milk sales.

Report On Bread Study Ready Soon

A preference survey for breads varying in sugar, fat, and milk content and in firmness has been made in Rockford, Illinois, in cooperation with the bakery industry. Results will soon be ready for publication. Do consumers prefer richer breads than those now prepared commercially? If the bakery industry were more nearly to satisfy consumer preferences, would more bread and hence more wheat and other ingredients be consumed? Ideally, this preference study should be repeated in a few other cities representing widely separated parts of the country, and the preferred breads should then be given market tests.

Citrus Products Studies

Recent rapid increases in consumption of frozen concentrated orange juice have radically changed the pattern of marketing for citrus fruits and their products. Shifts in production of oranges and grapefruit between California, Florida, and Texas have brought about other changes in the market for citrus fruits. For several years the Department has been cooperating with the citrus industry in conducting research to assist the industry in selling more citrus fruits and products with reasonable returns to growers. At present studies are being made of consumer preferences for citrus fruit juices varying in sweet - sour ratio to indicate changes that might bring about increased market acceptance of the juices. A market test is under way in Erie, Pa., in cooperation with the Florida citrus industry and processors, to determine whether canned frozen grapefruit sections - a new product - can be marketed successfully and thereby improve the market for grapefruit.

Fats and Oils Problems

The declining consumption of fats and oils by the soap industry with the growing use of detergents based on petroleum derivatives, and the introduction of rubber-base interior paints have created a serious situation in the fats and oils field. Studies of possible new or expanded market outlets for fatty acids and fatty-acid derivatives and the market situation and prospects for drying oils are nearing completion. Perhaps the

most striking development in this field in recent years has been the rapid advance in industrial uses of synthetic materials based on physical-science research. Knowledge of the basic chemical and physical properties of many of the non-agricultural raw materials is considerably ahead of that for agricultural commodities. Outside the industrial products field, a potentially large market for fats and oils may lie in their use in animal feeds. This possibility will be explored in a study getting under way.

Research To Increase Food Consumption

Another area of research to assist in expanding domestic markets revolves about the problem of under-consumption of most farm products in the lower-income groups. Can the food market be divided into income groups in such a way that direct efforts may be taken to stimulate consumption among the groups in the lower levels?

Plans are now progressing in the Division of Human Nutrition and Home Economics of the Agricultural Research Service to make a nation-wide survey in the spring of 1955 of consumption of and expenditures for a long list of food products, by income groups and other characteristics. It is hoped that such information can be broken down on a regional basis. These data, with other information that is available, can be of great help in "pin-pointing" areas of sub-standard consumption, and in relating typical consumer reactions to changes in economic factors such as prices and income. With more information of this type available, careful appraisals and evaluations can be made of various proposals for domestic distribution programs such as those in several bills introduced in the last session of Congress.

How Research Develops

These examples of work in the Market Development Branch indicate the direction which research is taking to assist in expanding markets, particularly for products in abundant supply. Problems for research are brought to the attention of the Department in several ways. Acts of Congress, such as that establishing the School-Milk Program, frequently indicate immediate areas for research. The Research and Marketing Advisory Committees, appointed by the Secretary of Agriculture under the Research and Marketing Act of 1946, draw up priorities for new research needs each year. Representative industry groups come to the Department seeking assistance through research. Similarly, land-grant colleges and the Utilization Division of the Agricultural Research Service, seek help through marketing research for problems that go beyond their usual scope of activities. Research projects are normally selected from a reservoir of problems. Selection depends on the magnitude of the problem for the industry, the supply situation for the commodity, the cooperation of interested groups, and the feasibility of attack through a research approach.

* * *

THE ANNUAL MEETING OF THE NATIONAL ASSOCIATION OF MARKETING OFFICIALS will be held at Purdue University, October 18-22. Of the many topics listed on the tentative program for the meeting, the highlight appears to be a discussion of transportation of farm commodities, with speakers representing truckers, railroads, and the Interstate Commerce Commission.

Better Refrigeration For Shipped Tomatoes

By Dr. Harold T. Cook

Improved methods of refrigerating transcontinental rail shipments of fall-grown tomatoes which provide more protection and better in-transit ripening than current shipping practices have been developed through co-operative research by the U. S. Department of Agriculture and the California Agricultural Experiment Station.

Benefits of the new refrigeration technique have been demonstrated in successful shipments of several hundred commercial cars of tomatoes from California to Eastern markets.

The new technique is quite a departure from present rail refrigeration methods for tomatoes. First, ventilators of refrigerator cars are closed all during transit - something that many shippers fear to do, but which Department tests have proved causes no harm. Next, icing of the cars is limited to the actual cooling requirements of the loads. Finally, in-transit temperatures of the cars are held at higher levels than those currently used. In connection with car icing, research personnel have worked out an experimental schedule of icing based on the temperature of tomatoes at time of loading and the maintenance of in-transit temperatures of 55 to 65 degrees Fahrenheit, depending upon outside weather.

The new refrigeration technique should prove of considerable economic importance to shippers and receivers. Test shipments showed that the moderately high temperatures of the new methods brought about an increased pack-out of marketable tomatoes and a shorter and more economical ripening time at point of destination. It also eliminated decay resulting from chilling injury in transit caused by temperatures below 50° F. Then too, there is a saving in the cost of icing cars.

While the study leading to the development of the more efficient refrigeration methods was based on test shipments of fall grown Pearson tomatoes from the Tracy District of California to New York City, it should have application to refrigerated rail shipments of mature-green tomatoes from other producing areas and during other seasons.

The over-all research project, conducted by the Biological Sciences Branch of the Agricultural Marketing Service, and the Vegetable Crops Department of the California Experiment Station at Davis, Cal., was directed at the effect of field and transit temperatures on the keeping quality and ripening behavior of fall-grown tomatoes. It was begun in 1951. Prior to last year, the study had revealed the following:

It is not uncommon commercial practice to over-refrigerate tomatoes which results in undesirably low transit temperatures. When refrigerator car temperatures are below 50 degrees F. decay is increased and the fruit ripens slowly. The effect of chilling in transit increases as the harvesting season progresses, probably because of exposure to low field temperatures. Tomatoes can be shipped in cars with ventilators closed from origin to destination without harm and desirable transit temperatures can be maintained in the closed cars by limiting the ice supply to actual cooling requirements of the load.

The experimental icing schedule for transcontinental rail shipments of tomatoes that was worked out is as follows:

<u>Average fruit temperature (F.) when loaded</u>	<u>Initial ice per bunker</u>
Between 80° and 90°	Full bunker capacity (Approx. 2-3/4 tons)
Between 75° and 80°	2 tons
Between 65° and 75°	Half-stage capacity (Approx. 1-1/2 tons)
Between 60° and 65°	1 ton
Between 55° and 60°	1/2 ton
Between 50° and 55°	None

In closed-vent cars, the initial icing shown in the schedule is adequate for a transit period of 6 days or slightly longer during the early part of the season and is effective for 9 to 11 days during cool or cold weather. During warm weather, re-icing with 1/2 to 1 ton in each bunker provided adequate refrigeration. Such re-icing probably is most effective if delayed until the fifth or sixth day in transit.

Tests, last year, using this schedule in comparison with usual commercial shipments, confirmed earlier findings, particularly that prolonged exposure to low temperatures results in poor ripening and decay of tomatoes. In addition, the following conclusions were reached:

The increased pack-out of marketable tomatoes and the shorter, more economical ripening time obtained when temperatures in transit were moderately high indicate a definite advantage from temperatures about 50° F. during the early part of the shipping season and about 55° later. Average temperatures as high as 68° for a 10-day transit period were not detrimental. Temperatures within the range 55° to 65° are optimum for transcontinental rail shipments. Ripening occurs at these temperatures and, when evident on arrival, indicates that serious chilling did not occur in transit.

W. R. Barber, horticulturalist, Fresno, Cal., W. A. Radspinner, associate horticulturalist, New York City, both with the Biological Sciences Branch, AMS, and Leonard L. Morris, associate olericulturalist, California Agricultural Experiment Station at Davis, Cal., directed the research work in connection with the project and are the authors of a report on the study which is being prepared for publication.

Market Basket Margins

By Kenneth E. Ogren

Everyone connected with the marketing of farm commodities has a continuing interest in the spread between the price the farmer gets for his crops and the price the consumer pays for food products. The Agricultural Marketing Service, USDA, regularly calculates this price spread information for many food items and for a typical "market basket" of farm food products bought by city families.

Now the Marketing Organization and Costs Branch of AMS has revised an earlier publication, "The Farmer's Share of the Consumer's Food Dollar," USDA Leaflet No. 123, bringing this information up to date and discussing some of the factors that affect the changes in these marketing spreads. Some of the points raised are summarized below:

During recent years, the share of the consumer's dollar going to the farmer has been decreasing. However, in deciding whether farmer-consumer spreads are too high or too low, consideration should be given to the changes in the services performed by the processing and marketing trades in getting various agricultural food products from farms to city consumers and changes in the cost of performing these services. These factors are involved not only in the overall price spread for food products, but also in making comparisons between commodities. Most marketing costs such as wages, freight rates, and utility rates, have increased steadily since the end of World War II. And during this time housewives have been buying more prepackaged foods, frozen foods, and other partially prepared foods such as cake and pie mixes, which require more marketing services.

Total marketing margin -- difference between the retail cost and farm value for a "market basket" of food -- accounted for 56 cents of each dollar consumers spent for food products in retail stores during the first half of 1954. On the average, about 44 cents of the dollar was shared by farmers. The amount received by farmers was less than in either of the 2 preceding years, but well above the pre-World War II annual average.

The marketing margin covers payments for many different marketing services such as local assembly, storage, freezing and refrigeration, transportation, processing, wholesaling, and retailing. Payments for many other cost items also are contained in the marketing margin. These include wages, transportation charges, rents, State and local property taxes, fees and licenses, electricity and other utilities, costs of containers and other supplies, allowances for depreciation and obsolescence, and other costs incurred by marketing firms. The difference between the marketing margin and these costs represents the profits or losses of the marketing firms.

Wages and salaries are the largest single item in the total expenses of most food-marketing firms. In the years immediately preceding 1954, labor costs amounted to about 50 percent of the total marketing margin.

About 5 million workers are employed in the job of moving agricultural food products from our farmers to consumers, in the form, time, and place desired. These workers are directly engaged in assembling, transporting, processing, and distributing farm food products. Food marketing activities indirectly require the services of additional workers through related service activities, such as banks and insurance companies. And many other workers are needed to provide the plant and equipment, machines, containers, and supplies used by marketing firms.

The increasing importance of marketing services in relation to farm production is illustrated by shifts in the number of workers in agriculture and in marketing. During the 20 years ended in 1953, the number of workers in agriculture decreased by about 30 percent while the number engaged in food marketing increased by more than 50 percent.

Profit Proportion of Total Margin

An estimate of total profits as a proportion of the total marketing margin is not available for recent years. In 1939 profits amounted to 8 percent of the total food marketing bill and about 5 cents of the consumer's food dollar. Earnings statements of the large food-processing companies and retail food chains indicate that for several years before 1954 their profits (before deducting income taxes) per dollar of sales were about the same as, or less than, in 1939. When the higher-income-tax rates of these more recent years are considered, net returns per dollar of sales had to be lower than in prewar years.

A typical supermarket has a profit of about 2 cents per dollar of sales. After deductions for income taxes, this is equal to about 1 cent. Profits per dollar of sales of food manufacturers average somewhat higher although they vary considerably by type of product.

Market Margin More Fixed than Farm Prices

The marketing cost or margin is determined by factors that differ widely from those that affect prices of farm products. For example, when the farmer's price for his product declines because of a bigger supply, costs of marketing are not directly or immediately reduced. Those costs, like rent, taxes and wages, tend to hold steady. For that reason, marketing margins usually vary less than farmers' prices, especially percentagewise. This is particularly noticeable in periods when farm prices are declining.

Some of the larger costs in marketing are slow to change. Items like rent, freight rates, utilities, and wage rates may be definitely fixed by individual contracts or Government regulations. They are not immediately affected by either inflationary or deflationary pressures. In an inflation, both farm prices and marketing margins rise, but the marketing margin goes up more slowly than farm prices. However, the rise in farm prices

lasts for a shorter time than the advance in marketing costs.

Marketing margins for food and food products vary widely by commodities and commodity groups. For example, the marketing channel in 1953 absorbed 31 cents of each dollar consumers spent for poultry and eggs, and 78 cents of each dollar spent for grain products such as bread, crackers, and breakfast cereal. For bread and other bakery products, the costs of baking and other processing greatly exceed the payment received by farmers for the grain in these products.

Why the big difference between commodities? The answer is that some products require more marketing services than others. Some are in forms that are very different from those of the products as they leave the farm.

The housewife, as a consumer, does not buy wheat. She buys bread and other bakery goods. The bread contains ingredients besides the flour made from the wheat. The consumer is buying these, and buying also the services of millers, bakers, and distributors that go into the production and distribution of the finished goods.

The housewife does not buy cattle. She buys only a piece of the animal after it has been slaughtered and processed and presented to her in the cuts she prefers.

Ready-Prepared Foods Costlier

As a consumer the housewife is also buying many services that were performed formerly in the home. She and her family eat more meals in the restaurants; buy ready-prepared foods. These save the housewife much labor in the home, but the foods are costlier when bought in these forms.

A recent study by home economists of the Department revealed that a family meal of ready-to-serve food costs over one-third more than a meal requiring a maximum of home preparation.

Three sets of menus were used in this study of food preparations for a family of 4 for 1 day -- one with food requiring the most home preparation, one with partially prepared foods, and one with foods ready to serve. The 3 sets of menus were not designed to be typical, but rather to illustrate maximum differences in time and money of using home-prepared and commercially-prepared foods.

The out-of-pocket cost was much less for the home-prepared foods, but the preparation of these foods took almost four times the amount of time required for the ready-to-serve foods.

The trend toward more commercial preparation is likely to continue, particularly when consumers have a high level of income. As incomes increase, consumers are willing to pay for services that maintain quality and increase the convenience and attractiveness of food products, that save time, and that provide a greater variety of foods. As these marketing services increase, the cost of the "market basket" increases, with the additional cost added to the marketing margin.

More Milk For School Children

By Philip Fleming

More children will be drinking more milk during the school year just getting under way. The U. S. Department of Agriculture has developed plans to increase consumption of fluid milk by children in schools, and the program is now being put into operation.

Since milk is the most nearly perfect of all foods, an adequate supply is essential for school children. Promising gains have been made in the serving of milk in schools, during recent years, but ample opportunity for expansion still exists.

This year, Congress authorized use of Commodity Credit Corporation funds to boost milk consumption and to expand dairy markets. The Agricultural Act of 1954 provides that, beginning September 1, 1954 and ending June 30, 1956, not to exceed \$50,000,000 annually shall be used to increase the consumption of fluid milk by children in nonprofit schools of high school grade and under.

Attention had already been given to how such a school milk program might be operated. In July, representatives of the dairy industry and school lunch advisors had met with Department representatives to formulate recommendations. When the Agricultural Act became law, tentative plans for the Special School Milk Program had already been developed. They were quickly approved by the Board of Directors of the Commodity Credit Corporation and by Secretary of Agriculture Ezra Taft Benson.

Here is how the Special School Milk Program operates:

Nationally, it is administered by the Department's Agricultural Marketing Service -- the agency which operates the National School Lunch Program. Within the States, the program is administered by State educational agencies. In some States, the educational agency is not permitted by law to disburse funds to private schools. In those cases, AMS administers the program directly in such schools.

To boost consumption of milk, schools are reimbursed for a portion of the cost of the increased amount of milk they serve to children. This reimbursement method is similar to that used so successfully in the operation of the National School Lunch Program. Milk is bought from local dairies, maintaining the usual relationships between buyers and sellers in local markets.

USDA advances funds to the State educational agency, and the State agency in turn reimburses the schools. The maximum rate of Federal re-

imbursement is 4 cents per half-pint in schools which served milk last year, and 3 cents in schools which did not serve milk during the 1953-54 school year. State agencies are authorized to vary their rates of reimbursement to individual schools, within these limits.

To determine how much consumption has been increased, a "base" is established for each participating school, representing normal consumption of milk. Then, reimbursement is paid in connection with milk served to children in excess of this base. To participate in this Special School Milk Program, nonprofit schools must agree to serve fluid whole milk (including flavored whole milk) meeting State and local standards for butterfat content and sanitation, and to operate their food and milk service on a nonprofit basis.

Local circumstances largely determine how a school can most effectively increase milk consumption by its students. Therefore the Program gives school officials wide authority in its local application. Schools which have not been serving milk have unlimited opportunity to make milk available to their children. And schools which already have milk service can increase the usage of milk in many ways. Milk may be served at any time during the school day, so that a serving of milk at recess time might be started, or some schools might find it feasible to serve milk before the start of classes in the morning. Schools already serving milk can also increase the size of the servings; a child may drink as many half pints of milk as he wants.

School Lunch Program Indicates Consumption Gains

An indication of milk consumption gains which can be made under this Program is afforded by the increases already realized through operation of the National School Lunch Program. During the past school year, participating children consumed about 400 million quarts of milk as a beverage -- more than double the amount of milk used in the Program in its first year of operation during the 1946-47 school year. The School Lunch Program now reaches 10,139,000 children in more than 56,000 participating schools. The Special School Milk Program will increase the number of schools in which milk is available, and will stimulate greater consumption in schools where it is already available.

This increase in consumption means both immediate and long-range benefits to the school children and to the dairy industry. Benefits to the children are in the good health that milk drinking promotes during their childhood coupled with the firm health foundation established for later years. Continued good health in adult life is promoted also by early establishment of the habit of drinking milk.

Dairy farmers, distributors, and others in the industry will benefit by the immediate consumption increase, as more of the current production moves directly into use. But even more important is the promise that this Special School Milk Program holds for future markets for dairy products. Widespread establishment of the milk-drinking habit among boys and girls now will assure active and expanding markets for dairy products in future years.

Cutting Cauliflower Shipping Costs

By John C. Winters

Savings of over a third of current container costs and freight and refrigeration charges on fresh cauliflower shipped from California to Eastern markets are possible from the use of new packing procedures developed through research sponsored by the U. S. Department of Agriculture.

Briefly, the new packing method consists of closely trimming heads of cauliflower and packing them in two layers in broccoli crates instead of using standard cauliflower shipping containers which hold only one layer of the product.

With the new double-layer pack, more than twice as many heads of cauliflower can be packed in a slightly larger crate and the number of heads that can be shipped in a refrigerated car is increased considerably - to an estimated 9,302 heads as compared with an average of 5,448 heads now shipped per car. Using a figure of about 16 cents a head for container, packing, transportation, and icing costs for cauliflower from California to Eastern markets in the present single-layer standard crate, a reduction of over 5.5 cents per head is possible through use of the double-layer pack in the broccoli crate.

These potential savings are based on full car shipments. It is probable, however, that the new pack will be used most extensively in shipments of mixed carloads of cauliflower and other vegetables. Because so many heads can be shipped per car, straight carloads of the new double-layer pack may be limited to large receivers, including chain stores. However, much cauliflower is shipped now in mixed carloads and the dimensions of the broccoli crate are such that it can be successfully shipped in mixed carloads of other California vegetables.

Over the 10 years since the 1942-43, while wholesale prices of cauliflower on the New York market declined, costs of moving the commodity from California to New York increased substantially. Container costs rose 62.4 percent; freight charges, 29.4 percent; refrigeration, 32.5 percent; field packing labor, 97.1 percent; and other labor 71.5 percent. Because of this situation there have been times that California cauliflower was abandoned in the field.

This problem prompted the Department to initiate a study of the possibility of cutting packing and transportation costs of fresh cauliflower as part of a project on related problems for fresh vegetables and melons carried out by the Western Growers Association under the Agricultural Mar-

keting Act of 1946. This contract research is administered by the Transportation and Facilities Branch of the Agricultural Marketing Service, USDA. The cauliflower shipping study has been underway since 1952 and a preliminary progress report appeared in the October 1952 issue of *MARKETING ACTIVITIES*, under the title, "Curds Not Weight."

Since the jacket leaves represent a large proportion of the weight of a head of cauliflower - up to 75% after it has been trimmed for shipment under current practices - an attempt was made to find how much closer these leaves could be trimmed without affecting the protection they afford the cauliflower curd and still effect economies in packing and shipping. Other established cauliflower shipping practices were reappraised and the use of the WGA lettuce crate and the standard broccoli crate to get a double-layer pack of cauliflower were tried out. The WGA lettuce crate was dropped as a possibility when it was found that it had only a limited savings potential.

Packing tests showed that the nailed broccoli crate would lend itself to double-layer packing of cauliflower if the stem was shortened and at least a pound more of jacket leaves were trimmed off.

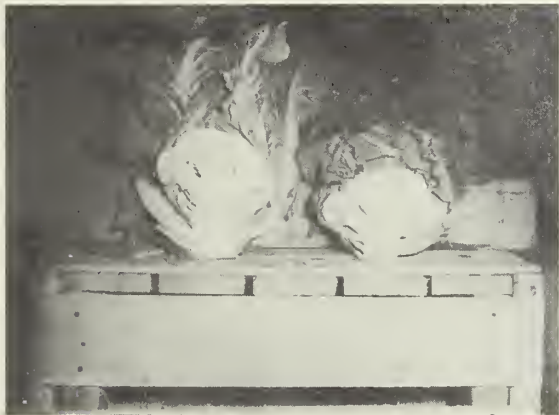


Figure 1.--The head on the left was taken from a single-layer cauliflower crate. The other head has been trimmed for packing in a double-layer test container.



Figure 2.--A pony crate and a broccoli crate after examination. Note the disarrangement of the standard crate on the left compared with the orderly condition of the double-layer pack.

The results of the first few shipping tests with the broccoli crates indicated that some type of protection should be used between the two layers of heads packed curd-to-curd if bruising of the curds in both layers was to be prevented. This problem was solved by placing soft paper pads between the layers of heads.

In a series of 10 transportation tests from California to New York City, the average percentage of bruising was found to be less for cauliflower packed double-layer in the broccoli crate than for the single-layer pack in the standard cauliflower crate.

A report, "Potential Savings by Shipping Cauliflower in Double-Layer Packs," is being prepared for publication. Participating in the work, besides the author, were B. M. Masters, formerly with the Western Growers Association, and B. P. Rosanoff, AMS Transportation Economist.

Egg Facts For Consumers

By Rowena S. Mainland

A new U.S.D.A. publication "Egg Buying Guides for Consumers" presents facts about eggs that are of interest to producers and distributors as well as consumers. The extent to which retail merchandising methods create a demand for a commodity that will continue beyond a specific promotional period may depend largely on the featuring of fundamental buying guides. It is important, therefore, that distributors and consumers have a common understanding of differences in the quality of eggs and differences in size based on weight; of the meaning of labeling information, and of the effect of temperature on egg quality.

The new 8-page popularly-styled publication, known as Home and Garden Bulletin No. 26, deals with these and other facts about a commodity that may appear on the homemaker's market list any day in the week, and on the table any meal of the day. It is more of a "picture book" with explanatory text than a bulletin with illustrations.

Quoting the introductory page of highlights gives a preview of the content of HG-26 - "Egg Buying Guides for Consumers":

"Are These Egg Facts NEWS to You?

"Eggs are valued for their proteins, vitamins, and minerals, any meal of the day, the year round. Like other important protein foods, eggs should be properly handled to protect their quality.

"Proper handling means cooling the eggs promptly after they are gathered from the hen's nest, and keeping them under refrigeration until they are to be used. (When laid, the temperature of the egg is about 105° F.)

"Refrigeration temperatures for maintaining egg quality for short periods range from about 35° to 45° F., with humidity about 85 percent. A lower temperature is required when eggs are to be stored for several weeks or months.

"At 70° to 80° F., eggs may drop in quality in a few days; at higher temperatures, more rapidly. Therefore, eggs displayed on a counter at the market, held in unrefrigerated storerooms, transported in a hot truck, or left in a hot car or kitchen for several hours, will lose quality.

"It is wise to buy eggs from a dealer who keeps his supply under refrigeration and sells eggs from a refrigerated display case.

"It is equally wise to keep eggs cool in the home, being sure to put them

in the refrigerator as soon as possible after buying them, and to keep them refrigerated until they are to be used.

"There are four U. S. Consumer grades for eggs -- U. S. Grade AA, U. S. Grade A, U. S. Grade B, and U. S. Grade C. Each grade refers to a specific interior quality, defined by Government standards.

"Grade AA and Grade A eggs are of top quality. They have a large proportion of thick white which stands up well around a firm high yolk, and are delicate in flavor.

"High-quality eggs are good for all uses, but their upstanding appearance and fine flavor are especially appreciated for poaching, frying, and cooking in the shell.

"Grade B and Grade C eggs are good eggs, though they differ from higher quality eggs in several ways. Most of the white is thin, so these eggs spread over a wide area. The yolk is rather flat, and may break easily.

"Eggs of the two lower qualities have dozen of uses in which appearance and delicate flavor are less important. They are good for scrambling, to use in baking, in thickening sauces and salad dressings, and to combine with other foods such as cream sauce, tomatoes, cheese, or onions.

"There are 6 U. S. Weight Classes to cover all the range of egg sizes. Only 4 of these 6 classes are likely to be found on the retail market. They are Extra Large, Large, Medium, and Small. Each size refers to a specific weight class, based on ounces per dozen of eggs.

"The grade mark on a carton of officially graded eggs always carries the letters "U. S.," always tells the grade (quality) of the eggs and the size (weight per dozen), and always states the date of grading. Reading all information on the label and on the carton is important.

"It often pays to consider both the grade and the size of eggs in relation to price, and to decide on quality in relation to the use of the eggs.

"As quality and weight are judged independently of each other, a number of combinations of grade and size are possible. You may therefore find the grade you prefer (AA, A, B) in the weight class you prefer (Extra Large, Large, Medium)."



All Grade A eggs are not Large



All Grade B eggs are not small

Beef And Vegetables

By G. Chester Freeman

Two of the Nation's major food industries are joining forces to their mutual advantage, by featuring a combination of their commodities. A beef and vegetable merchandising campaign has been arranged for the period from September 30th through October 9th, this year, by the livestock and meat industry and the vegetable industry.

Both groups conduct continuing merchandising programs for their commodities, and have plentiful supplies available this fall. The livestock and meat industry is pushing an active beef promotion campaign, and the fruit and vegetable industry is exerting efforts to promote vegetables.

The suggestion that the two groups might effectively link their efforts won an enthusiastic reception from both food groups since beef and vegetables make a natural meal-time combination. The proposal found approval too with other groups in food marketing channels from farmer to consumer. Representatives of retailers, restaurateurs, and similar food merchandisers offered their cooperation in the campaign.

USDA Supporting Program

Secretary of Agriculture Ezra Taft Benson also endorsed the industries' promotions, and tendered them the full support of the Plentiful Food Program of the U. S. Department of Agriculture. Food trades specialists in the Department's Agricultural Marketing Service are backing the merchandising efforts through the Plentiful Foods Program in their work with food industry groups throughout the country. And the Department's informational and educational facilities are providing consumers with information about beef and vegetables, and their use in combination dishes.

After careful consideration of supply and demand factors, the period from September 30 to October 9 was selected as the ideal time for the campaign. Supplies of vegetables will be ample then, as the harvest-time peak is reached. Supplies of all beef will also be plentiful, but the moderately-priced intermediate grades will be especially plentiful, as marketings of grass-fed cattle reach their seasonal peak. This beef is particularly well suited to use in such thrifty, tasty dishes as beef stews, beef pot pies, and the many other dishes in which beef and vegetables complement each other so well.

On the demand side, the September 30 to October 9 merchandising campaign is timed to find best possible reception by consumers. The cooler fall weather will stimulate consumers' full appreciation of the hearty appetizing meals that feature combinations of beef and vegetables.

ABOUT MARKETING

The following publications, issued recently, may be obtained upon request. To order, check on this page the publications desired, detach and mail to the Agricultural Marketing Service, U. S. Department of Agriculture, Washington 25, D. C.

Publications:

White Potato Storages for New Jersey, Long Island, and Southeastern Pennsylvania. June 1954. 17 pp.

United States Standards for Grapefruit. (Texas and States other than Florida, California and Arizona). August 20, 1954. 8 pp.

United States Standards for Oranges. (Texas and States other than Florida, California and Arizona). August 23, 1954. 8 pp.

Fees For the Inspection of Commodities and Products Assigned to the Grain Division. June 25, 1954. 5 pp.

Regulations Under the Packers and Stockyards Act, Reprinted from Federal Register, July 22, 1954. 11 pp.

Fiber and Spinning Test Results for Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1954 . August 1954. 5 pp.

Regulations and Fees for Cotton Testing Service Effective August 1, 1954. 11 pp.

Regulations of The Secretary of Agriculture for Cotton Classification Under Cotton Futures Legislation. Reissued July 1954. 25 pp.

1955 Acreage and Marketing Guides, Winter Vegetable Winter Potatoes. August 1954. 30 pp.

United States Consumer Standards for Fresh Turnips. August 20, 1954. 4 pp.

United States Standards for Bunched Carrots. September 18, 1954. 4 pp.

United States Standards for Carrots with Short Trimmed Tops. September 18, 1954. 4 pp.

United States Standards for Grades of Processed Fruits and Vegetables (Canned, Dried, Frozen, Sugar Products and Miscellaneous) (As of July 1, 1954) 4 pp.

Transportation Problems of Expanding, Western Agriculture. June 1954. 227 pp.

Trade Reaction to Winter Pears Packed in Fiberboard Boxes. August 1954. 11 pp.

Homemakers' Use of and Opinions about Fats and Oils Used in Cooking. June 1954. 186 pp.

The Sources of Insects Found in Stored Raisins. June 1954. 2 pp.

Margins, Shrinkage, and Pricing of Certain Fresh Vegetables in Honolulu. June 1954. 31 pp.

Handling Empty Apple Boxes in Pacific Northwest Packing and Storage Houses. Marketing Research Report No. 71. June 1954. 35 pp.

Tree Nuts Production, Farm Disposition, Value, and Utilization of Sales 1952 and 1953. August 1954. 8 pp.

Soybean County Estimates 1952-53, Acreage, Yield, and Production Harvested for Beans in 20 Principal States. August 1954. 35 pp.

Shorn Wool Production - 1954. August 5, 1954. 1 pp.

Universal Cotton Standards Conference for Good Middling 1954. June 7, 1954. 14 pp.

Record Number of Turkeys Raised this Year. August 20, 1954. 4 pp.

Metropolitan Economic Areas as a Tool for Marketing Research in Horticultural Specialities. August 1954. 11 pp.

Nonfarm Consumption of Fluid Milk and Cream. A Revised Series of Statistics. Marketing Research Report No. 72. May 1954. 51 pp.

Milk Cows on Farms June 1954. August 2, 1954. 5 pp.

(Be certain you have given us your name and full address when ordering statements or publications. Check only the individual items you wish.)

NAME _____

STREET _____

CITY _____ ZONE _____ STATE _____

October 1954